

GENERAL

As of the date of the start work order, all monuments as shown on the project plans of the job site to be protected shall be the responsibility of the General Contractor.

If a protected monument is destroyed after the date of the start work order, the General Contractor shall be ultimately responsible for the expense of the replacement of the monument.

A survey monument will be considered destroyed that has been:

- Moved more than 0.007 m (0.02 ft) in any direction from the ties provided by and certified to by the Contractor's Licensed Land Surveyor
- Broken.
- Disturbed to a point that the survey monument's position is no longer fixed or stable.
- Removed from the ground for any reason.
- Vertically adjusted without the written authorization of the Monroe County Surveyors Office.

Where all or part of a project is within the City of Rochester limits, the contractor shall adhere to the City of Rochester Monument specification - SECTION R626 - SURVEY MONUMENTS for those monuments that are part of the project within the city limits.

DESCRIPTION

The work shall consist of the adjustment, or removal of existing survey monuments; installation of new survey monument frames and covers; resetting of existing monument frames and covers; related survey work, submittal of survey data and monument certification; prepared by a Land Surveyor licensed to practice in the State of New York that the work completed meets the standards and specification as required in the Contract Documents, as directed by the Monroe County Surveyors Office and the Project Manager.

MATERIALS**MONUMENT FRAME AND COVER**

Monument frame and cover shall be cast iron as supplied by MCDOT.

SELECT GRANULAR FILL

Select granular fill shall conform to the requirements of NYSDOT Standard Specifications, Section 203, latest revision.

CONCRETE

Concrete shall be Class A conforming to the requirements of NYSDOT Standard

Specifications, Section 501, latest revision. The Contractor may submit a mix for approval that is at least equivalent to the specified Class A concrete.

CONSTRUCTION DETAILS

GENERAL

Adjustment of survey monuments shall be completed under the direction of a Land Surveyor licensed to practice in the State of New York. The MCDOT Surveyors Office shall be provided with the final positional data (both horizontal and/or vertical), along with certification by the Land Surveyor supervising the work that the position of adjusted monument meets the specification that the horizontal position is maintained within 0.003 m (0.01 ft) of the original position of the monument and/or that the vertical position of the shall be within 0.002 m (0.006 ft) relative to the measured difference between the original and the final adjusted vertical position of the monument.

In the event that a survey monument is destroyed during construction, the survey monument shall be replaced by MCDOT, and there shall be a \$2000 deduction from the cost of the contract in favor of the County.

NEW MONUMENT FRAME AND COVER

New monument frame and cover shall be furnished by MCDOT and installed with new survey monuments, or to replace existing monument frames and covers, or over existing survey monuments where existing frame and cover is missing. New monument frame and cover shall be set centered over the survey monument, placed true to line and grade, make full and even bearing on the underlying surface, and are to be non-rocking when in place. The new monument frame and cover shall be set flush with the finished grade.

HORIZONTAL ADJUSTMENT OF EXISTING SURVEY MONUMENT

Survey monument horizontal adjustment is to take place only at the written direction of the Monroe County Surveyors Office. Survey monument horizontal adjustment performed without prior written authorization from the Monroe County Surveyors Office shall be considered as the destruction of a survey monument, and subject to the same conditions as previously stated.

Horizontal adjustment of a survey monument shall be performed under the supervision of a Land Surveyor licensed in New York State. The Land Surveyor shall submit a plan to the Monroe County Surveyors Office as the procedures and equipment that will be used to make the horizontal adjustment of a survey monument. Once the contractor's Land Surveyor has received written notification to proceed, the adjustment may be started. Once the work is complete the contractor's Land Surveyor shall submit the original field notes of the measurements made, a copy of a report the way the work was performed, and certification that the work has been completed with the tolerances stated herein. Payment may be made once the Monroe County Surveyors Office has reviewed and approved the completed adjustment.

VERTICAL ADJUSTMENT OF EXISTING SURVEY MONUMENT

Survey monument vertical height adjustment is to take place only at the written direction of the Monroe County Surveyors Office. Survey monument vertical height adjustment performed without prior written authorization from the Monroe County Surveyors Office shall be considered as the destruction of a survey monument, and subject to the same conditions as previously stated.

Vertical adjustment of a survey monument shall be performed under the supervision of a Land Surveyor licensed in New York State. The Land Surveyor shall submit a plan to the Monroe County Surveyors Office as the procedures and equipment that will be used to make the vertical adjustment of a survey monument. Once the contractor's Land Surveyor has received written notification to proceed, the adjustment may be started. Once the work is complete the contractor's Land Surveyor shall submit the original field notes of the measurements made, a copy of a report the way the work was performed, and certification that the work has been completed with the tolerances stated herein. Payment maybe made once the Monroe County Surveyors Office has reviewed and approved the completed adjustment.

HORIZONTAL AND VERTICAL ADJUSTMENT OF EXISTING SURVEY MONUMENT

Survey monument horizontal positioning and vertical height adjustment is to take place only at the written direction of the Monroe County Surveyors Office. Survey monument vertical height adjustment performed without prior written authorization from the Monroe County Surveyors Office shall be considered as the destruction of a survey monument, and subject to the same conditions as previously stated.

Horizontal and vertical adjustment of survey monument shall follow the same procedures as stated under the section for Horizontal Adjustment of Existing Survey Monument and the section for Vertical Adjustment of Existing Survey Monument.

REMOVE EXISTING SURVEY MONUMENT

The existing survey monument, including frame and cover, shall be carefully excavated for and removed. Existing survey monument, including frame and cover, that is solid, undamaged and acceptable for reuse shall be cleaned of all extraneous material in such a manner as to be nondeleterious to the existing survey monument. Existing survey monument, including frame and cover, shall be safely stored on site, and the Monroe County Surveyors Office notified to arrange for pickup. The excavation shall be backfilled with select granular backfill and the disturbed surface area restored.

Any existing survey monument, and/or frame and cover that are damaged or found to be unacceptable for reuse shall be disposed of by the Contractor.

DESTROYED SURVEY MONUMENT

Any survey monument that is destroyed after the date of the start of work, and the responsible party is unclear or not determinable, the monument shall be replaced by the Monroe County Surveyor and there shall be a \$2000 deduction from the cost of the contract in favor of the County.

RESET EXISTING MONUMENT FRAME AND COVER

The existing monument frame and cover shall be removed, cleaned of all extraneous material and reset over the existing survey monument. Existing monument frame and cover shall be set centered over the survey monument, placed true to line and grade, make full and even bearing on the underlying surface, and are to be non-rocking when in place. The reset existing monument frame and cover shall be set flush with the finished grade.

BASIS OF PAYMENT**GENERAL ALL ITEMS**

The unit price bid for all items shall include the cost of: related survey work; preparation and submittal of survey data; excavation; furnishing and installing concrete and select granular backfill; and furnishing all labor, material and equipment necessary to complete the work.

Payment will be made at the each price bid as follows: Fifty (50) percent of the each price will be paid upon completion of the installation and acceptance of the work. The remaining fifty (50) percent will not be paid until all of the required certification record information has been submitted to and approved by the Monroe County Surveyors Office. Failure to correct any erroneous or incomplete information will result in forfeiture of the withheld fifty (50) percent.

The contractor shall be responsible for preserving any monuments within the project limits. If any such monumentation is destroyed or disturbed, a cost of \$2000 per monument shall be incurred by the contractor. Only the Monroe County Surveyor's Office shall replace and re-establish any such monumentation that is destroyed or disturbed.

VERTICAL ADJUSTMENT OF EXISTING SURVEY MONUMENT

The unit price bid shall include the cost of: removing, cleaning, and reinstalling existing frame and cover; cutting off top of existing survey monument; reestablishing the point of elevation and the theoretical position value.

REMOVE EXISTING SURVEY MONUMENT

The unit price bid shall include the cost of: removing, cleaning and storing existing monument, frame and cover; making arrangement for pickup; and disposal of damaged or unusable monument, frame and cover.

INSTALL NEW MONUMENT FRAME AND COVER

The unit price bid shall include the cost of installing the furnished frame and cover; removing and disposing existing frame and cover.

RESET EXISTING MONUMENT FRAME AND COVER

The unit price bid shall include the cost of removing, cleaning, and resetting existing frame and cover.

Payment will be made under:

<u>Item No.</u>	<u>Item</u>	<u>Pay Unit</u>
627.02	Horizontal Adjustment of Existing Survey Monument	EA
627.03	Vertical Adjustment of Existing Survey Monument	EA
627.04	Horizontal and Vertical Adjustment of Existing Survey Monument	EA
627.05	Remove Existing Survey Monument	EA
627.06	Install New Monument Frame and Cover	EA
627.07	Reset Existing Monument Frame and Cover	EA